

Enroll No

K.E.Society's  
**Rajarambapu Institute of Technology, Rajaramnagar**  
 (An Empowered Autonomous Institute, affiliated to SUK)  
**Unit Test - II (2025-26)**  
 T.Y. B.Tech.-Robotics and Automation Engineering

Q.P. Code
UT 3280

**Course Code:** RA323

**Course Name:** Programmable Logical Controller and SCADA

**Day & Date:** 20/09/2025

**Time:** 10:30 to 11:30 *am*

**Max Marks-** 25

**Instructions:** 1) All questions are compulsory.  
 2) Assume suitable data if necessary.  
 3) Use of non-programmable calculators is allowed

			Marks	BT Level	COs
Q.1	A	Design a temperature control system using PLC, to turn ON the Heater (for temp. less than 20 degrees) for 45 seconds and the Cooler (for temp. greater than 30degrees) for 55 seconds.	06	6	CO3
	B	Construct a ladder diagram for Automatic Lubrication of supplier conveyer belt by considering suitable PV to respective timers.	07	4	CO3
OR					
	B	Construct a ladder diagram for Automatic control of Warehouse Door using PLC.	07	6	CO3
Q.2	A	What is fieldbus? Explain the reduced fieldbus 3 layer structure.	06	2	CO4
	B	What is MODBUS? Explain the types of communications takes place using MODBUS.	06	2	CO4
OR					
	B	Draw the block diagram and explain how PROFIBUS used in communication.	06	3	CO4

